

Claims

What is claimed is:

- 5 1. A method of identifying a data stream in a digital television receiver, comprising: *from where?*
obtaining a locator adapted for identifying a data stream; *URL?*
associating the locator with one of a plurality of data streams, each one
of the plurality of data streams being associated with one of a plurality of
10 television channels; and
mapping the locator to an IP address. *DNS?*
2. The method as recited in claim 1, further comprising:
generating the IP address from a set of IP addresses reserved for use in
15 private networks. *DHCP?*
3. The method as recited in claim 1, wherein creating a locator comprises:
instantiating a locator object. *inherit*
- 20 4. The method as recited in claim 3, further comprising:
garbage collecting the locator object when it is no longer used. *inherit*
5. The method as recited in claim 1, wherein each one of the plurality of
25 data streams is associated with the same one of the plurality of television channels.
6. The method as recited in claim 3, wherein the plurality of data streams
are associated with two or more of the plurality of television channels.
- 30

7. The method as recited in claim 1, wherein each one of the plurality of data streams is associated with a single tuner.

8. The method as recited in claim 1, wherein the plurality of data streams
5 are associated with two or more tuners.

9. The method as recited in claim 1, further comprising:
allocating a private IP address to be mapped to the locator.

10

10. A method of selecting a data stream in a digital television receiver,
comprising:

obtaining a data stream locator associated with a data stream;
providing the data stream locator to an interface map, the interface
15 map being adapted for mapping one or more data stream locators to one or
more IP addresses; and
receiving an IP address associated with the data stream locator from
the interface map.

20

11. A method of selecting a data stream in a digital television receiver,
comprising:

obtaining an IP address;
determining whether the IP address corresponds to a data stream
25 locator associated with a data stream; and
when it is determined that the IP address corresponds to a data stream
locator associated with a data stream, selecting the data stream associated with
the data stream locator.

30

12. The method as recited in claim 11, further comprising:
instructing a tuner to read the data stream associated with the data
stream locator.

13. The method as recited in claim 12, wherein instructing a tuner to read the data stream associated with the data stream locator comprises instructing a tuner that is tuned to the data stream to read the data stream associated with the data stream locator.

14. The method as recited in claim 12, wherein instructing a tuner to read the data stream associated with the data stream locator comprises instructing a tuner that is currently unused to read the data stream associated with the data stream locator.

15. The method as recited in claim 11, further comprising releasing the IP address for future use when the IP address is no longer being used.

16. The method as recited in claim 11, wherein determining whether the IP address corresponds to a data stream locator associated with a data stream is performed by an interface map responsible for mapping one or more locator objects to one or more IP addresses, each one of the locator objects being associated with a data stream, the method further comprising: < //
instructing the interface map to release the IP address for future use when the IP address is no longer being used.

17. A method of selecting multicast IP data transmitted in broadcast streams, comprising: ✓
instantiating a multicast object capable of listening for multicast data which is sent through the object, the object including a method for specifying an IP address, a method for specifying a multicast group address to listen in on, and a method for receiving packets addressed to the multicast address; ✓
calling the method for specifying an IP address, the method instructing a tuner to read a data stream associated with the IP address when the IP

address corresponds to a data stream locator, and otherwise instructing a network card to read data from the network;

calling the method for specifying a multicast group address to specify a multicast group address associated with the IP address; and

5 calling the method for receiving packets addressed to the multicast group address. ✓

18. The method as recited in claim 17, further comprising:
garbage collecting the multicast object when it is no longer being used.

10

19. A method of selecting multicast IP data transmitted in broadcast streams, comprising: ✓

obtaining an IP address; ✓

15 determining whether the IP address corresponds to a data stream locator associated with a data stream; ✓

specifying a multicast group address associated with the IP address; ✓

when it is determined that the IP address corresponds to a data stream

20 locator associated with a data stream, instructing a tuner to read the data stream associated with the data stream locator and to receive packets

addressed to the multicast group address; and ✓

when it is determined that the IP address does not correspond to a data stream locator associated with a data stream, instructing a network card identified by the IP address to listen to the multicast group address. ✓

25

20. The method as recited in claim 19, further comprising:
receiving packets addressed to the multicast group address.

30

21. A method of selecting multicast IP data transmitted in broadcast streams, comprising:

obtaining an IP address, the IP address having an associated data stream locator;

5 instructing a tuner to read a data stream associated with the data stream locator;

specifying a multicast group address associated with the data stream;

and

receiving packets addressed to the multicast group address.

10

22. A computer program product for selecting a data stream, the computer program product comprising:

15 a computer-readable medium storing computer-readable instructions thereon, the computer-readable instructions including:

instructions for obtaining an IP address;

instructions determining whether the IP address corresponds to a data stream locator associated with a data stream; and

20 instructions for selecting the data stream associated with the data stream locator when it is determined that the IP address corresponds to a data stream locator associated with a data stream.

20

23. A digital television receiver for selecting multicast IP data transmitted in broadcast streams, comprising:

25

a processor; and

a memory, the memory storing therein instructions for:

obtaining an IP address, the IP address having an associated data stream locator;

30

instructing a tuner to read a data stream associated with the data stream locator;

specifying a multicast group address associated with the data
stream; and

receiving packets addressed to the multicast group address